APPENDIX B

In the Specification

Please insert on page 1, between the title of the application and the first paragraph, the following new paragraph:

CROSS-REFERENCE TO RELATED APPLICATION

This application claims priority from U.S. Provisional Patent Application No. 60/158,321 filed on October 8, 1999 in the names of DeVico, Fouts and Tuskan for "VIRUS COAT PROTEIN/RECEPTOR CHIMERAS AND METHODS OF USE"

All Pending Claims

1. A chimeric polypeptide comprising:
a virus coat polypeptide sequence, wherein the virus is an immunodeficiency virus selected from the group consisting of HIV, SIV, FIV, and FeLV, a viral receptor polypeptide sequence that has a bonding affinity for the virus coat polypeptide sequence, and an amino acid sequence spacer linked to both the virus coat polypeptide sequence and viral receptor polypeptide sequence and positioned therebetween to form a single chain polypeptide, wherein the spacer consists of an amino acid sequence of sufficient length to allow the single chain polypeptide to fold thereby permitting the virus coat polypeptide sequence and the viral receptor polypeptide sequence to form an intramolecular interacting complex.

2. The chimeric polypeptide of claim 1, wherein the virus is a virus having an envelope polypeptide.

3. The chimeric polypeptide of claim 1, wherein the virus is a virus that binds a co-receptor polypeptide.

6. The chimeric polypeptide of claim 1, wherein the HIV is HIV- 1 or HIV-2.

7. The chimeric polypeptide of claim 1, wherein the HIV is a macrophage tropic or a lymphocyte tropic HIV.

8. The chimeric polypeptide of claim 2, wherein the envelope polypeptide comprises a gp 120 polypeptide sequence.

9. The chimeric polypeptide of claim 8, wherein the gp120 polypeptide sequence lacks 60 amino acids from the amino terminus and 20 amino acids from the carboxyl terminus.

10. The chimeric polypeptide of claim 1, wherein the receptor is a CD4 polypeptide sequence.

11. The chimeric polypeptide of claim 10, wherein the CD4 polypeptide sequence comprises the Dl and D2 domains.

13. The chimeric polypeptide of claim 1, wherein the spacer has from about 5 to about 200 amino acids.

14. The chimeric polypeptide of claim 1, wherein the spacer has from about 10 to about 100 amino acids.

15. The chimeric polypeptide of claim 1, wherein the spacer has from about 15 to about 50 amino acids.

16. The chimeric polypeptide of claim 1, wherein the spacer has from about 20 to about 40 amino acids.

24. The chimeric polypeptide of claim 1, further comprising a pharmaceutically acceptable carrier.

Method Claims to be Rejoined

34. A method for producing an antibody that binds to the chimeric polypeptide of claim 1, comprising administering the chimeric polypeptide of claim 1 to a subject in an amount sufficient for the subject to produce antibody to the chimeric polypeptide of claim 1.

46. A method for identifying an agent that inhibits an interaction between a virus and a virus co-receptor comprising the steps of:

(a) contacting the chimeric polypeptide of claim 1 with a virus co-receptor under conditions allowing the chimeric polypeptide and the co-receptor to bind, in the presence and absence of a test agent; and

(b) detecting binding in the presence and absence of the test agent, wherein decreased binding in the presence of the test agent thereby identifies an agent that inhibits binding between the virus and the virus co-receptor.

49. The method of claim 46, wherein the test agent is added after contacting the chimeric polypeptide with the virus co-receptor.

50. The method of claim 46, wherein the test agent is added before contacting the chimeric polypeptide with the virus co-receptor.

51. The method of claim 46, wherein the test agent is a library of agents.

52. The method of claim 46, wherein the test agent is selected from the group consisting of a peptide, an organic molecule, an antibody, an antiviral, an immunodeficiency virus co-receptor or functional fragment thereof.

53. The method of claim 47, wherein the immunodeficiency virus co-receptor is a CCR5 or CXCR4 polypeptide sequence.

54. The method of claim 46, wherein the virus co-receptor is present on the surface of an intact cell.

55. The method of claim 54, wherein the intact cell is present in an animal.

56. The method of claim 55, wherein the animal is a non-human primate.

57. A method for identifying an agent that inhibits an interaction between a virus and a virus receptor comprising the steps of:

a) contacting the chimeric polypeptide of claim 1 with a test agent; and

b) detecting binding between the virus coat polypeptide sequence and the viral receptor polypeptide sequence, wherein a decreased amount of binding in the presence of the test agent identifies an agent that inhibits binding between the virus and the virus receptor.

60. The method of claim 57, wherein the test agent is added after contacting the chimeric polypeptide with the virus receptor polypeptide.

61. The method of claim 57, wherein the test agent is added before contacting the chimeric polypeptide with the virus receptor polypeptide.

62. The method of claim 57, wherein the test agent is a library of agents.

63. The method of claim 57, wherein the test agent is selected from the group consisting of a peptide, an organic molecule, an antibody, an antiviral, an immunodeficiency virus receptor or functional fragment thereof.

64. The method of claim 58, wherein the immunodeficiency virus receptor polypeptide is a CD4 polypeptide sequence.

65. The method of claim 57, wherein the virus receptor polypeptide is present on the surface of an intact cell.